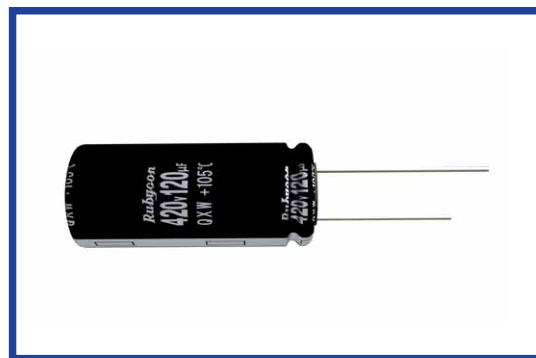


**QXW SERIES**
**105°C 2000 hours, Ultra Miniaturized**

•Temperature Range : -40°C~+105°C

RoHS compliance


**◆SPECIFICATIONS**

| Items  | Characteristics  |                     |                                   |                    |  |                  |                                    |      |  |
|--|--|---------------------|-----------------------------------|--------------------|--|------------------|------------------------------------|------|--|
| Category Temperature Range                     | -40~+105°C   |                     |                                   |                    |  |                  |                                    |      |  |
| Rated Voltage Range                            | 400~450Vdc   |                     |                                   |                    |  |                  |                                    |      |  |
| Capacitance Tolerance                          | ±20% (20°C, 120Hz)   |                     |                                   |                    |  |                  |                                    |      |  |
| Leakage Current(MAX)                           | $I=3\sqrt{CV}$ (After 5 minutes application of rated voltage)<br>I=Leakage Current(μA)      C=Capacitance(μF)      V=Rated Voltage(Vdc)  |                     |                                   |                    |  |                  |                                    |      |  |
| Dissipation Factor(MAX) (tanδ)                 | <table border="1"> <tr> <td>Rated Voltage (Vdc)</td> <td>400</td> <td>420, 450</td> <td>(20°C, 120Hz)</td> </tr> <tr> <td>tanδ</td> <td>0.15</td> <td>0.20</td> <td></td> </tr> </table>   | Rated Voltage (Vdc) | 400                               | 420, 450           | (20°C, 120Hz)                              | tanδ             | 0.15                               | 0.20 |  |
| Rated Voltage (Vdc)                            | 400  | 420, 450            | (20°C, 120Hz)                     |                    |  |                  |                                    |      |  |
| tanδ   | 0.15   | 0.20                |                                   |                    |  |                  |                                    |      |  |
| Endurance                                      | After applying rated voltage with rated ripple current for 2000 hours at 105°C, the capacitors shall meet the following requirements. <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±20% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </table> | Capacitance Change  | Within ±20% of the initial value. | Dissipation Factor | Not more than 200% of the specified value. | Leakage Current  | Not more than the specified value. |      |  |
| Capacitance Change                             | Within ±20% of the initial value.  |                     |                                   |                    |  |                  |                                    |      |  |
| Dissipation Factor                             | Not more than 200% of the specified value.   |                     |                                   |                    |  |                  |                                    |      |  |
| Leakage Current                                | Not more than the specified value.   |                     |                                   |                    |  |                  |                                    |      |  |
| Low Temperature Stability Impedance Ratio(MAX) | <table border="1"> <tr> <td>Rated Voltage (Vdc)</td> <td>400</td> <td>420, 450</td> <td>(120Hz)</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>5</td> <td>6</td> <td></td> </tr> </table>   | Rated Voltage (Vdc) | 400                               | 420, 450           | (120Hz)                                    | Z(-25°C)/Z(20°C) | 5                                  | 6    |  |
| Rated Voltage (Vdc)                            | 400  | 420, 450            | (120Hz)                           |                    |  |                  |                                    |      |  |
| Z(-25°C)/Z(20°C)                               | 5  | 6                   |                                   |                    |  |                  |                                    |      |  |

**◆MULTIPLIER FOR RIPPLE CURRENT**

|                |        |      |      |      |      |
|----------------|--------|------|------|------|------|
| Frequency (Hz) | 60(50) | 120  | 500  | 1k   | 10k≤ |
| Coefficient    | 0.80   | 1.00 | 1.25 | 1.40 | 1.50 |

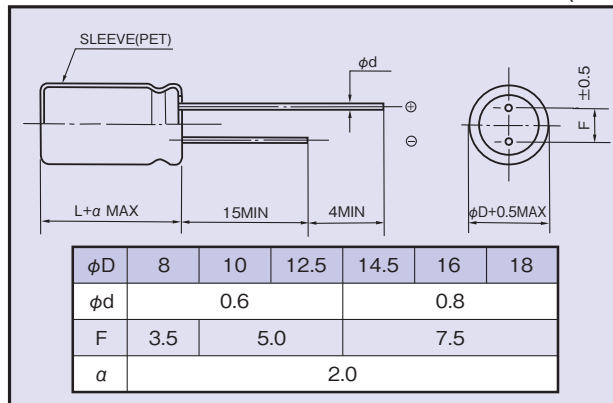
**◆OPTION**

|                         |               |
|-------------------------|---------------|
| PET Sleeve (-40~+105°C) | Code<br>EFR ※ |
|-------------------------|---------------|

※PET Sleeve -25~+105°C(EFC) is also available, please consult our sales offices.

**◆DIMENSIONS**

(mm)


**◆PART NUMBER**

|               |        |             |                       |        |              |           |
|---------------|--------|-------------|-----------------------|--------|--------------|-----------|
| □□□           | QXW    | □□□□□       | M                     | □□□    | □□           | DXL       |
| Rated Voltage | Series | Capacitance | Capacitance Tolerance | Option | Lead Forming | Case Size |

**◆STANDARD SIZE**

| Rated Voltage (Vdc) | Capacitance (μF) | Size φD×L (mm) | Rated Ripple Current (A r.m.s./105°C,120Hz) |
|---------------------|------------------|----------------|---|
| 400                 | 18               | 8×25           | 0.19  |
|                     | 22               | 8×30           | 0.22  |
|                     | 27               | 8×35           | 0.25  |
|                     | 33               | 8×45           | 0.33  |
|                     | 33               | 10×30          | 0.33  |
|                     | 39               | 8×50           | 0.35  |
|                     | 39               | 10×35          | 0.37  |
|                     | 47               | 10×40          | 0.43  |
|                     | 56               | 10×45          | 0.48  |
|                     | 56               | 12.5×30        | 0.47  |
|                     | 68               | 12.5×35        | 0.54  |
|                     | 82               | 12.5×40        | 0.62  |
|                     | 82               | 14.5×31.5      | 0.61  |
|                     | 100              | 12.5×50        | 0.73  |
|                     | 100              | 14.5×35        | 0.70  |
|                     | 100              | 16×31.5        | 0.71  |
|                     | 120              | 14.5×40        | 0.79  |
|                     | 120              | 16×35          | 0.80  |
|                     | 150              | 14.5×50        | 0.94  |
|                     | 150              | 16×40          | 0.92  |
| 150                 | 18×31.5          | 0.89           |   |
| 180                 | 16×50            | 1.08           |   |
| 180                 | 18×40            | 1.06           |   |
| 220                 | 18×45            | 1.20           |   |
| 420                 | 15               | 8×25           | 0.12  |
|                     | 18               | 8×30           | 0.14  |
|                     | 22               | 8×40           | 0.22  |
|                     | 27               | 8×45           | 0.26  |
|                     | 33               | 10×30          | 0.32  |
|                     | 39               | 10×35          | 0.36  |
|                     | 47               | 10×40          | 0.41  |
|                     | 56               | 10×50          | 0.49  |
|                     | 56               | 12.5×30        | 0.46  |
|                     | 68               | 12.5×35        | 0.53  |
|                     | 82               | 12.5×45        | 0.63  |
|                     | 82               | 14.5×31.5      | 0.60  |
|                     | 100              | 12.5×50        | 0.71  |
|                     | 100              | 14.5×40        | 0.72  |
|                     | 100              | 16×31.5        | 0.69  |
|                     | 120              | 14.5×45        | 0.81  |
|                     | 120              | 16×35          | 0.78  |
|                     | 120              | 18×31.5        | 0.80  |
|                     | 150              | 16×45          | 0.94  |
|                     | 150              | 18×35          | 0.92  |
| 180                 | 16×50            | 1.05           |   |
| 180                 | 18×40            | 1.04           |   |
| 220                 | 18×50            | 1.22           |   |

| Rated Voltage (Vdc) | Capacitance (μF) | Size φD×L (mm) | Rated Ripple Current (A r.m.s./105°C,120Hz) |
|---------------------|------------------|----------------|---|
| 450                 | 12               | 8×25           | 0.15  |
|                     | 15               | 8×30           | 0.17  |
|                     | 18               | 8×35           | 0.19  |
|                     | 22               | 8×45           | 0.23  |
|                     | 27               | 10×30          | 0.30  |
|                     | 33               | 10×35          | 0.34  |
|                     | 39               | 10×40          | 0.39  |
|                     | 47               | 10×45          | 0.44  |
|                     | 47               | 12.5×30        | 0.43  |
|                     | 56               | 12.5×35        | 0.49  |
|                     | 68               | 12.5×40        | 0.56  |
|                     | 68               | 14.5×31.5      | 0.56  |
|                     | 82               | 12.5×45        | 0.63  |
|                     | 82               | 14.5×35        | 0.63  |
|                     | 82               | 16×31.5        | 0.64  |
|                     | 100              | 14.5×40        | 0.72  |
|                     | 100              | 16×35          | 0.73  |
|                     | 120              | 14.5×50        | 0.85  |
|                     | 120              | 16×40          | 0.82  |
|                     | 120              | 18×31.5        | 0.80  |
|                     | 150              | 16×50          | 0.98  |
|                     | 150              | 18×40          | 0.97  |
|                     | 180              | 18×45          | 1.09  |
|                     | 220              | 18×50          | 1.22  |